Mining engineers find, develop, and recover the resources needed to support the daily needs of society from the minerals required to support our daily health to the materials used for roads, buildings, computers, cell phones among most other items used daily. The mining engineering discipline requires a broad range of basic engineering skills along with the ability to apply specialized technical knowledge in the areas of geotechnical engineering, explosives engineering, ventilation, mine power systems, automation and control, environmental engineering and extractive metallurgy.

### Freshman Year

**FALL SEMESTER**

- **EGR 101 - ENGINEERING EXPLORATION I** - 1
- **EGR 102 - FUNDAMENTALS OF ENGINEERING COMPUTING** - 2
- Choose **CHE 105 or PHY 231** - 4
- **UK Core - Comp. & Comm. I** - 3
- **MA 113 - CALCULUS I** - 4

**TOTAL HOURS: 14**

**SPRING SEMESTER**

- **EGR 103 - ENGINEERING EXPLORATION II** - 2
- **UK Core - Comp. & Comm. II** - 3
- **MA 114 - CALCULUS II** - 4
- Choose **CHE 105 or PHY 231** - 4
- **PHY 241 --OR-- CHE 111** - 3
- **UK Core - Social Sciences** - 3

**TOTAL HOURS: 17**

Total Freshman Hours: 31

### Sophomore Year

**FALL SEMESTER**

- **EM 221 - STATICS** - 3
- **EES 220 - PRINCIPLES OF PHYSICAL GEOLOGY** - 4
- **MA 213 - CALCULUS III** - 4
- **MNG 201 - MINING ENGINEERING FUNDAMENTALS** - 3
- **PHY 232 - GENERAL UNIVERSITY PHYSICS** - 4

**TOTAL HOURS: 18**

**SPRING SEMESTER**

- **EES 230 - FUNDAMENTALS OF GEOLOGY I** - 3
- **EM 302 - MECHANICS OF DEFORMABLE SOLIDS** - 3
- **MA 214 - CALCULUS IV** - 3
- **ME 220 - ENGINEERING THERMODYNAMICS I** - 3
- **MNG 291 - ELEMENTS OF MINE DESIGN** - 3
- **MNG 303 - DEFORMABLE SOLIDS LABORATORY** - 1
- **MNG 331 - EXPLOSIVES AND BLASTING** - 2

**TOTAL HOURS: 18**

Total Sophomore Hours: 36

### Junior Year

**FALL SEMESTER**

- **ME 330 - FLUID MECHANICS** - 3
- **MNG 211 - MINE SURVEYING** - 2
- **MNG 301 - MINERALS PROCESSING** - 3
- **MNG 302 - MINERALS PROCESSING LABORATORY** - 1
- **MNG 335 - INTRODUCTION TO MINE SYSTEMS ANALYSIS** - 3
- **MNG 351 - UNDERGROUND MINE DESIGN** - 3
- **UK Core - Humanities** - 3

**SPRING SEMESTER**

- **MNG 311 - ELECTRICAL CIRCUITS AND MINING MACHINERY** - 3
- **MNG 322 - MINE SAFETY AND HEALTH MANAGEMENT AND PROCESSES** - 2
- **MNG 371 - PROFESSIONAL DEVELOPMENT OF MINING ENGINEERS** - 3
- **MNG 435 - MINE SYSTEMS ENGINEERING & ECONOMICS** - 3
- **MNG 463 - SURFACE MINE DESIGN** - 3
<table>
<thead>
<tr>
<th>TOTAL HOURS: 18</th>
<th>Mineral Processing Technical Elective - 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Junior Hours: 36</td>
<td></td>
</tr>
</tbody>
</table>

**Senior Year**

<table>
<thead>
<tr>
<th>FALL SEMESTER</th>
<th>SPRING SEMESTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>EM 313 - DYNAMICS - 3</td>
<td>MNG 592 - MINE DESIGN PROJECT II - 3</td>
</tr>
<tr>
<td>MNG 332 - MINE PLANT MACHINERY - 3</td>
<td>Technical Elective - 3</td>
</tr>
<tr>
<td>MNG 341 - MINE VENTILATION - 3</td>
<td>Supportive Elective - 3</td>
</tr>
<tr>
<td>MNG 551 - ROCK MECHANICS - 4</td>
<td>UK Core - Community, Culture and Citizen - 3</td>
</tr>
<tr>
<td>MNG 564 - ENVIRONMENTAL CONTROL SYSTEM DESIGN AND RECLAMATION - 3</td>
<td>UK Core - Global Dynamics - 3</td>
</tr>
<tr>
<td>MNG 591 - MINE DESIGN PROJECT I - 1</td>
<td><strong>TOTAL HOURS: 15</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TOTAL HOURS: 17</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Senior Hours: 32</td>
<td></td>
</tr>
</tbody>
</table>

**Total Minimum hours Required for Degree: 135 hours**

---

University of Kentucky is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award associate, baccalaureate, masters, and doctorate degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097, call 404-679-4500, or online at [www.sacscoc.org](http://www.sacscoc.org) for questions about the accreditation of University of Kentucky.

Current UK students: Please login to [http://myUK.uky.edu](http://myUK.uky.edu) to access your personalized major template and degree audit via the Graduation Planning System (GPS). This major template is the curriculum requirements for completion of the degree program only and is not a personalized audit based on your completed coursework. This major template does not reflect entrance requirements for selective majors. Please consult with the college to learn more about admission to this major.